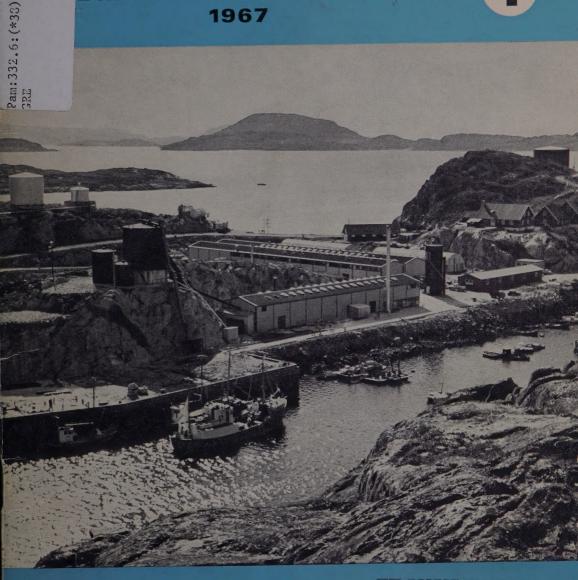
EMINISTRY OF GREENLAND 1967



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## GREENLAND ON THE ROAD TO 1970 PLAN OF INVESTMENTS 1966-70 The Ministry for Greenland 1967

### PREFACE

This pamphlet introduces a series of publications on developments in Greenland which the Ministry for Greenland is planning to put out during the next few years.

Time and again the need for broader information on what is being done and planned for in Greenland has been emphasized from various sides, including an orientation on the background for the policy adopted in respect of this province. Also the Provincial Council for Greenland has stressed the need for further details on this latter subject, and the publication of the mentioned series may thus be seen as a result of the initiative taken by the Council.

The first pamphlet has been prepared by the editor, Kaj Christiansen, while the translator, Jens Poulsen, is responsible for the Greenlandic version.

Subsequent pamphlets will deal with the policy adopted in different fields such as the distribution of population, the fisheries and education.

It is hoped that these pamphlets may constitute the proper basis for objective discussions on the policy to be pursued in Greenland.

CARL P: JENSEN

### INVESTMENTS 1966-1970

During the 5-year period commencing in 1966 planned investments in Greenland aggregate almost twice the amount spent during the preceding five years. Expressed in one figure this means that during the period 1966-70 a total amount of Dkr. 1,245 mill. will be expended on housing developments, vessels and the many other types of plant and facilities invested in for the purpose of providing a higher standard of living, improved earning possibilities, and a brighter future for the population in Greenland.

For the 5-year period 1961-65 the corresponding amount was Dkr. 625 mill. At that time, certainly, the purchasing value of a Danish krone was somewhat higher than today, but even at that the mentioned increase represents abt. 75 %.

The Dkr. 1,245 is the end figure arrived at in the Five-Year Plan prepared by the Ministry for Greenland in consultation with the Provincial Council for Greenland, the Greenland Council and the various administrations. It is not definitely known whether appropriations in that amount will be made available for investment during the next five years. The final decision rests with Parliament, which issues the grants on a year by year basis. Unquestionably, though, the Plan will have a radical effect on the overall development of the Greenland community in years to come, but its realization will, of course, not serve to cover all needs.

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In Greenland, as in all other parts of Denmark, conditions do not make it possible to tackle all problems at once. There is neither sufficient money nor manpower available for that. A choice must be made between the points first to be dealt with and those that will have to be postponed to a later date.

A choice like that is never an easy one. It also poses a great many problems in the rest of Denmark where there, like in Greenland, is an uncovered demand for new hospitals, schools and other public facilities. But it is a choice that must be made. In this respect a government institution is in no different position than the head of a family who with his weekly pay-cheque in his pocket must first figure out what he can afford to spend and then, from among many alternatives, decide how to spend it.

The Five-Year Plan, therefore, is no indication of what its originators have felt there was a need for. They have had to work on the assumption that the Dkr. 1,245 mill. was the amount that could be made available by the state when weighing the tasks in Greenland against those facing the government in other parts of Denmark. Their problem has been to figure out how best to distribute the mentioned amount to give the Greenland community the full potential of the investment.

#### FOUR TASKS OF PRIMARY IMPORTANCE

The main idea behind the planning has been the theories forming the basis for the work that has been done by the Greenland Council of 1960 (G 60), viz.:

A significant improvement of the standard of living in Greenland will depend on a continued concentration of the population whereby a larger proportion of the inhabitants will settle in urban districts. Only in this way will it be possible to provide the necessary sources of income and to make school facilities, social services, etc. available to a reasonable extent.

The mainstay of Greenland trade must be the all-seasonal marine fisheries.

In consequence hereof future developments will primarily pivot on the open-water towns: Godthåb, Frederikshåb, Sukkertoppen and Holsteinsborg. These centres provide the best opportunities for fishing on a large scale - and at all seasons of the year. Second in importance from an economic point of view will be the shrimp centres at Disko Bay

When considering this as the main line, the four tasks set out below must be given priority when distributing the total amount available for investment:

- 1. The Export Trade i.e. the fisheries and the fishing industry as they will form the economic basis for Greenland's future development.
- 2. Housing Developments necessary for concentration of the population (apart from that also for other reasons).
- 3. Schools for Children and Adults well educated manpower being one of the prerequisites for reorganization of Greenland's trade and industry with a view to improved economy.

4. Social Services - to cover the growing need for day nurseries, kindergartens, recreation centres and other facilities for the young people, etc. caused by the growth of the towns, the industrial development, and the increasing employment of women.

The priority to be given to these four sectors will, of course, not exclude the provision of other facilities from now on and until 1970. For one thing, there are tasks of a social nature within all branches of the Greenland community which should not be postponed. Secondly, any activities within the above fields are liable to involve other investments. When putting up a large number of houses in a town, this may imply that the power plant will have to be expanded. The purchase of larger fishing craft may call for enlarged harbour facilities to provide quicker service, etc. Apart from that, much work in Greenland still has to be done by non-natives. Therefore, increased investments would in various fields automatically create the need for expanded canteen facilities, housing accommodations, etc. for the increasing number of people coming in from outside.

In spite of the fact that most of the investments, in direct consequence of the central idea of the Plan, will be applied to urban districts - more particularly to the open-water towns - all of the money will not necessarily be spent there. In this connection it should be emphasized also that the work done in the towns will, in many ways, prove of benefit to the population in the outposts too. The fact is that the town acts as a service centre for the entire municipality, and that part of the investments made in towns serve the very purpose of providing better housing possibilities, etc., thereby enabling people from outposts and settlements to move into town.

#### LARGE SHIFTS IN POPULATION

A factor of vital importance in the development of the Five-Year Plan is, of course, also the fact that the total population of Greenland must be expected, also in future, to increase at a higher rate than will the population in most other countries. The native population of Greenland (the number of citizens born in Greenland) is expected to increase by not less that one fifth during the period 1965-70, or from 35,500 to well over 42,300.

The exact distribution of these 42,300 people by the year 1970 cannot be foretold. A very careful study has been made, however, taking into consideration the excess of births and the anticipated migration. As a main result of this study, the following changes in the composition of the population may be expected:

A	ICE-FREE TOWNS	1960	1965	1970	
	(Godthåb, Frederikshåb, Sukkertoppen and Holsteinsborg)	6,500	9,100	14,700	
В	SHRIMP CENTRES AND NARSSAQ (Jacobshavn and Christianshåb)	2,650	3,800	5,000	

		1960	1965	1970
С	OTHER TOWNS	7,800	9,700	11,100
D	OUTPOSTS AND SETTLEMENTS IN THE SEALING DISTRICTS (Umanak, Upernavik, Thule and East Greenland)	3,950	4,250	4,550
E	OUTPOSTS AND SETTLEMENTS IN THE FISHING DISTRICTS	9,100	8,650	6,950

As may be seen from the above, it is only the outposts and settlements in the fishing districts that show a definite decline. This, however, does not mean that the influx to the industrial towns is believed to derive from these places exclusively. Also people from the towns in the northern and southern parts of Greenland are expected to be attracted by the industries. The rise in population which nevertheless is indicated for these latter towns may be explained by the fact that the excess of births is expected to more than compensate for the migrants.

#### PRINCIPAL FIGURES OF THE FIVE-YEAR PLAN

The foregoing chapters have explained the most important factors forming the basis for the Five-Year Plan. On this background - and after many other considerations - the overall investment programme was set up, the principal figures of which have been tabulated below.

Most of the figures in this tabulation are of such dimensions that to a great many people they do not mean so very much. The question that undoubtedly will be asked is: But what is Greenland going to get for the money when distributed in this way?

This question will be answered on the following pages. At the back of this pamphlet a breakdown by municipalities has been given of the investments and the expected increases or decreases in population. The plans may be changed for the individual municipalities, or the overall investment programme may be amended, e.g. in case of an emergency that could not have been foreseen when the plans were developed. A review will now be made of the overall investment programme for Greenland:

#### PRINCIPAL FIGURES OF THE FIVE-YEAR PLAN

Unit. Mill Dkr

	IIITC: IVII	III. DAI
The Church		4,8
Civil Service and Administration of Justice		19,9
Trade Subsidies		28,2
Health Service		25,5
Industrial Plant		44,3
Fishing Harbours with necessary facilities		47,7
Social Services		47,8
Power Supply		51,0
Fishing Craft		56,4

Unit: Mill. Dkr.

Roads, Water and Sewers	65,7
Other Technical Plant	71,8
Supply Service	72,2
Reserve Fund	77,6
Telephone, Radio, Transportation, etc	125,8
Schools and Libraries	85,6
Housing	415,1

#### EPOCH-MAKING DEVELOPMENTS WITHIN GREENLAND FISHERIES

As far as the export trade is concerned the targets of the Five-Year Plan may be grouped under the following three headings:

I. Initial steps towards the development of an ocean-going fleet of fishing vessels:

The Plan provides for the purchase of three trawlers and ten new boats with line-fishing equipment so that by 1970 Greenland should have a fleet of 14 line-fishing boats and 3 trawlers. Total investments abt. Dkr. 36 mill. Moreover, an amount of Dkr. 20 mill. has been provided for purchase of smaller fishing craft, mainly during the first few years.

II. Better Harbours and Better Service:

The larger craft are expected to yield an essentially higher income to owners and crew alike than is possible to earn when operating with the smaller vessels. An important factor in this improved earning power is, however, the need for quicker and more efficient service of the fishing fleet when in port. The larger and more expensive are the vessels in operation, the greater is the loss suffered from having them lying idle. The second, important point in the fisheries sector of the Five-Year Plan is, therefore, the improvement of fishing harbours, etc.

As regards wharfs and other direct harbour facilities, the Plan is so comprehensive that a considerable proportion of the requirements of the open-water towns in this respect should have been covered by 1970 or immediately thereafter.

Moreover, the efficiency of the fishing harbours will be improved by a number of service installations, such as f.inst. storage space, space for repairs and maintenance of fishing gear, etc. Service facilities of this nature have so far been available in the Greenland harbours to only a very modest extent. This is a drawback also for the smaller craft, but gradually as the larger vessels are taken into operation the need will be felt much more because of the larger volume of apparatus carried by these vessels. The need for facilities of this description will largely have been covered by 1970.

III. Development of the Fishing Industry:

The third, important step in the development of the export trade is the adaption of the fishing fleet capacity to the output capacity of the factories.

This will for one thing be of great importance to the shrimpers in the Disko Bay. The factory at Jacobshavn will be expanded to permit full employment of the fleet of shrimp catching boats.

Experiences gained in this particular field will emphasize the need for careful timing in the development of the fishing fleet and the production capacity, respectively, in order to maintain the proper balance. A few years ago the shrimpers could have a catch twice as large as could be processed at the existing factories. The quota arrangement resulting from a situation like that will, of course, primarily affect the shrimpers, but apart from that it will strike at the community as a whole if the main industry is compelled to operate at reduced capacity. By the above mentioned development of the fishing fleet coupled with the planned investment in production plant it should be possible to avoid any such discrepancy.

In addition to the expansion of the shrimp factory at Jacobshavn the Plan comprises a development of the fishing industry in the following respects:

Building of industrial plant at Frederikshåb.

Expansion of the industrial plants at Sukkertoppen and Holsteinborg.

Construction of a shrimp factory at Sydprøven.

Production plants at Nanortalik, Julianehåb and Kangatsiag.

Expansion of the production plant at Narssak.

An improvement of the production situation in the Umanak and Angmagssalik municipalities.  $\hfill \hfill$ 

#### STEEL SHIP YARD

In connection with the development of the fishing fleet it would seem natural to mention the planned expansion of the shipyards. An amount of Dkr. 20 mill. has been reserved for that purpose. The slipway facilities at Julianehåb, Frederikshåb, Godthåb, and Sukkertoppen will be improved, and during the 5-year period work will be commenced on the first large yard in Greenland; a steel ship yard at Godthåb.

By 1969-70 this yard should be ready to accommodate a 500 ton trawler on shore. From that time Greenland will also have a sufficient yard-capacity for construction of all types of craft which according to the Plan are to be added to the fishing fleet. The first Greenland trawler is, however, expected to be taken into operation as early as in 1967-68, and during the first couple of years it will therefore have to call at yards outside Greenland when going in for repairs.

## HOUSING DEVELOPMENTS TOTALLING DKR. 400 MILLIONS

By far the largest item on the Investment Plan is the amount set aside for housing developments. The expenditures in this field will exceed Dkr. 400 mill. - i.e. about one third of total investments. The amount will be distributed as follows:

Dkr. 264 mill. for subsidized housing developments comprising 1293 units in multifamily houses and 879 units in one or two-family homes.

Dkr. 12 mill. for youth residences to accommodate a total number of 200 young people.

Dkr. 95 mill. for accommodations for 518 civil servants coming into Greenland from outside.

Dkr. 44 mill. for living quarters (GTO) with accommodations for 500 men in replacement of existing buildings accommodating 400.

These figures represent an expansion in the housing sector by nearly  $100\,\%$  in the course of a very few years as may be seen from the figures on this page.

According to this building programme about 10,000 people can be accommodated in new subsidized dwellings during the 5-year period 1966-70. The housing shortage in Greenland has, however, assumed such dimensions that it cannot be covered 100% even through a construction programme on this scale. On the recommendation of the members of the Provincial Council the Greenland Council has therefore asked the Minister for Greenland to investigate the possibility of an extra grant-in-aid to permit the construction of a further 450 housing units for new settlers. The housing programme may thus be even larger in scope than indicated above.

# NUMBER OF HOUSING UNITS COMPLETED UNDER THE SUBSIDIZED HOUSING DEVELOPMENT PROJECT IN GREENLAND

The distribution of the planned housing units among the various towns and areas is, of course, strongly affected by the fact that the heavy growth in population in future years will probably be concentrated on the open-water towns. In the four towns: Godthåb, Frederikshåb, Sukkertoppen, and Holsteinsborg collectively the Five-Year Plan provides for subsidized construction of 1106 units against 530 during 1961-65, i.e. more than twice as many. For the shrimp centres and Narssaq the planned number is 342 against 267 during the preceding 5-year period, i.e. an increase by less than one third. The other towns will show a decline in housing developments as compared with the preceding five years, viz. from 500 to 381 units.

As regards outposts and settlements a considerable expansion in housing developments will be effected in the sealing districts with a planned number of 264 units against 159 during the preceding 5-year period. For outposts and settlements in the fishing districts the Plan, however, includes only 79 houses. As already mentioned a decrease in population is expected at these places as a result of the migration to urban districts, and one of the reasons for the heavy housing developments in the towns with the best occupational opportunities is the demand for accommodations for these migrants.

The average cost of a flat in an apartment building is: Dkr. 135,000 (1965 price level)

The average cost of a one-family house is: Dkr. 85,000 (1965 price level)

By this distribution the new housing developments will prove most efficient also when considering the population from the outposts. Provision of housing accommodations in town rather than at an outpost will mean that the family moving in there at the same time will increase its opportunities for higher earnings while also finding it possible to benefit from the better schools, social services, etc. available in town. These privileges will now be open to a much larger number of people than has previously been the case as persons looking for a dwelling in the development towns will have a far better chance of being accommodated during the next five years than formerly.

#### THE FIRST YOUTH RESIDENCES

For young, single persons moving into town the Plan includes an important innovation: the first youth residences. The project includes three such residences, viz. at Godthåb, Sukkertoppen, and Frederikshåb. In addition to a room for each, the Plan covers a common room for recreational purposes and a large, well furnished living room with a kitchenette to make it possible for the young people to make sensible use of their leisure hours. A resident couple of house parents will be in charge, who in addition to handling all practical problems will guide the young people and assist them with advice. The project foreseen here must, therefore, not be compared to the existing lodgings for manpower coming in from outside.

Many single persons moving into town are at present suffering under the miserable housing conditions which obviously will have an adverse effect both from a moral, a social and an occupational point of view. If properly equipped and operated, youth residences of the type provided for in the Plan would undoubtedly contribute to better harmony in the adjustment process of the young people to town life, and, of even more importance, to their new working conditions.

The youth residences are, however, also meant to accommodate other young people than the new arrivals - as f.inst. those living in crowded homes or under unfortunate family circumstances.

Probably the major concerns will be allocated a certain number of rooms in the residences where they may place their young employees. The possibility of obtaining better quarters will thus be tied in with the stability displayed by the individual in his work. An arrangement like that would have to be under the control of a neutral agency as regards dismissals, etc.

The cost of a room in a youth residence is Dkr. 61,000 when distributing the cost of common rooms, etc. (Calculated om basis of 1965 prices).

It should be added, however, that implementation of the youth residence project may not be possible. The cost per room is very high, and it has been suggested, therefore, to spend the money on ordinary flats, laid out with one room for each occupant and with a common kitchen and a common toilet.

#### 6 HOMES FOR APPRENTICES

The Five-Year Plan will also in other ways help to alleviate the housing problem confronting the young people. This will for one thing be done through construction of 6 homes for apprentices with accommodations for 150 people and by the building of student homes in connection with provision of schools for the young people. Finally it should be mentioned that the project for erection of multi-family houses includes abt. 150 2-room flats. In all probability these apartments will largely be occupied by unmarried mothers, a group which will include a large proportion of young girls.

## ACCOMMODATIONS FOR PEOPLE COMING FROM DENMARK

About one third of the amount to be invested in housing developments will be spent on houses for officials and living quarters for manpower coming in from outside. The background for this investment is that the implementation of the Greenland Development Plan necessarily will require employment of non-native manpower. Even when considering the planned accommodations, there will be an increasing shortage of dwellings for such people.

### SCHOOL FACILITIES FOR AN ADDITIONAL NUMBER OF 3000 CHILDREN

For the period 1966-70 there will be a heavier increase in the number of children of compulsory school age than at any previous time in the history of Greenland, viz. from abt. 7,000 to abt. 10,000 pupils. For classes 1-7 alone it will thus be necessary to provide 84 ordinary class rooms to cover this increase. The school building plans, however, comprise 155 ordinary class rooms, which means that 71 such rooms will be available for distribution among infant schools, courses of further education for students past the school-leaving age and for improvement of the educational situation in classes 1-7.

In addition hereto 36 subject rooms and abt. 15 rooms for special instruction will be constructed for the primary school.

These plans will not raise the educational system in Greenland to the target level, but provisions will be made for the heavy increase in the number of children of compulsory school age, and in addition hereto a possibility has been opened of covering about half of the distance towards the ultimate goals for education in advance of and subsequent to classes 1 - 7. As far as senior pupils are concerned the classroom shortage may furthermore be alleviated by making it possible for a larger number of these young people to attend school in Denmark for a certain period.

The average cost of a bed at a home for schoolchildren is appr. Dkr. 50,000 (1965 price).

#### NEW HOSTELS TO ACCOMMODATE 364 PUPILS

The school building projects will mainly be concentrated on the towns as it is here that the heavy increase in the child population must be expected and also because of the fact that a larger school system offers the best opportunity for optimum utilization of the money invested and of the teaching staff.

Out of consideration for the children from outposts and settlements an important feature of the Plan is, however, the building of hostels for children and young students. In 1967 a 154-bed students' hostel will be completed at Egedesminde and in 1969 a 130-bed hostel will be ready at Julianehåb. In addition hereto hostels will be erected in the sealing districts with space for 80 school children altogether.

When calculating the amount invested in primary schools the cost of providing housing facilities for the teachers must be included. An amount of abt. Dkr. 40 mill. has been set aside on the Plan for this purpose, but there would, of course, be no sense in building new classrooms if they cannot be staffed. During the 5-year period under review the number of teachers at primary schools will increase by about 250, the great majority of whom will have to be brought in from Denmark - a move that is only possible if they can be offered a place to stay. Moreover, it is hoped that a higher standard of living quarters may induce the teachers to stay on in Greenland for a longer number of years than has been the case so far.

The average cost of an ordinary classroom is Dkr. 200,000 (1965 price).

### A MILESTONE IN VOCATIONAL TRAINING

Insofar as adult education is concerned the Five-Year Plan contains a radical innovation with provision of Dkr. 12 mill. to cover the first stage of the construction of a vocational central school, to be located at Godthåb. This will be the first day school in Greenland to offer technical and other vocational courses and must on the whole be considered an epochal event in the history of vocational training in Greenland.

The school will have a student capacity of 200 (including 140 resident students), and within the framework of this centre the following courses will be provided:

preparatory courses for shop and office apprentices.

preparatory classes and theoretical courses for the further training of fitters and mechanics, carpenters, plumbers, painters and electricians.

courses for apprentices in various trades preparatory to further theoretical training in Denmark,

courses leading up to the coastal skipper's and the home-trade master's certificates.

vocational courses for fishermen and people working in the fishing industry. courses for unskilled workers, and

navigation school (at a later date).

However, it is not its function alone as an educational centre that makes the school stand out as such an important step forward. It will also serve as a technical centre and the centre of all vocational training in Greenland. The school may f. inst. at its own initiative arrange for vocational courses to be held at the central school or local schools,

Also after the inauguration of the school a considerable part of the vocational training will have to be provided outside Greenland. To the young people, however, who do not master the Danish language the vocational central school in Greenland will be of particular importance in providing them with far better opportunities for occupational training. On the long view, the Greenland community will benefit by becoming less dependent on outside manpower.

#### IMPROVED CONDITIONS FOR FUTURE TEACHERS AND HEALTH WORKERS

In still another two fields the Five-Year Plan opens an opportunity for improvements within adult education: An amount of Dkr. 3 mill. has been set aside for conversion and modernization of the teachers' training college and for construction of hostels for the trainees. Moreover, the Plan provides for construction of a school for health workers with accommodations for 46 resident students, at an estimated cost of Dkr. 2.5 mill.

In connection with the educational system it should finally be mentioned that the Plan includes an expansion of the central library amounting to Dkr. 1/4 mill. and installation of a library at Julianehåb at Dkr. 1/2 mill.

#### 42 SOCIAL WELFARE INSTITUTIONS

During the period 1966-70 expenditures on the construction and equipment and furnishing of social welfare institutions in Greenland will be about ten times the amount spent during the preceding five years. This is one of the fields within which the Five-Year Plan will cause a particularly heavy increase in expenditures.

A total amount of Dkr. 47.8 mill has been set aside on the Plan for investments of this nature, to which should be added a contribution of Dkr. 6 mill. from a private fund. On basis of these investments the construction of 42 institutions and other facilities will be commenced - and in the majority of cases also completed - within the 5-year period. The list is as follows:

8 day nurseries, each with room for 35 children. On the completion of these institutions the open-water towns and the shrimp centres will have day nursery facilities for every seventh child or more below the age of 2.

1 orphanage, to be located in Upernavik where there has been a particular demand for an institution of that nature - i.a. because the district is completely isolated for several months of the year.

8 kindergartens. With the implementation of these projects every fifth child in the towns in Greenland can attend kindergarten all day.

1 maternity home with accommodations for 22 infants, and 40 pregnant women or mothers. This home is being financed by the Egmont H. Petersen Foundation

5 youth club buildings - at Nanortalik, Frederikshåb, Godthåb, Sukkertoppen, and Christianshåb.

3 sports grounds at Dkr. 1/2 mill. each - at Egedesminde, Julianehåb, and Holsteinsborg.

Greenland's first hall for indoor athletics - at Godthåb. During the daytime this hall shall be available to the educational authorities, but outside regular school hours it may be used for various sports and other suitable purposes. In addition to the public grant for this project in the amount of Dkr. 3 mill. contributions will be received from the provincial exchequer and from private interests.

6 homes for apprentices, which, however, may also admit other young people in need of public assistance.

- 1 seamen's home.
- 4 assembly halls.
- 4 homes for the aged.

The cost of a youth club: Dkr. 0.9 mill. (1965 price). A day-nursery costs Dkr. 1.6 mill. and a kindergarten the same amount (1965 price).

When viewing the comprehensive building programme for social welfare institutions it should be taken into consideration that investments in this field have so far been very low. Consequently there is a considerable shortage of such institutions, especially as regards the children and young people. It must be assumed, however, that with the introduction of the Five-Year Plan social welfare institutions will become a fixed item on future investment programmes.

#### BETTER TOWNS TO LIVE IN

The four investment groups dealt with so far: The Export Trade, Housing Developments, Schools and Social Welfare Institutions are, as already mentioned, given priority on the Five-Year Plan.

The extensive activities within these fields, however, also involve other commitments. A number of public utilities must naturally be developed in pace with the growth of the towns: the water and electricity supply, the road network, the sewer system, etc. These are all measures which, because of the natural conditions of Greenland, tend to become very expensive.

The water is to be drawn from lakes and rivers, requiring the construction of iron concrete dams to raise the water level. The pipelines cannot be buried but must be carried in overground conduits, which are insulated and protected against freezing by electric heating. Inside the town area overground pipes cannot be allowed, but have to be led through heated concrete tunnels blasted into the ground.

As far as the sewers are concerned, circumstances are even more difficult. In all cases the sewers have to be blasted down into the broken rocky ground - often at a great depth - to obtain the necessary even slope. Also the sewers have to be protected against freezing for the ground is often permanently frozen, and at the outlet into the ocean very heavy reinforcement is required to resist the pressure of the ice.

Because of the above problems the towns are but sparsely provided with sewers and water mains, and also in the future it will not be possible, for financial reasons, to solve the sanitary problems in districts mainly consisting of one-family houses. In order to utilize these public utilities to a reasonable extent housing developments must be concentrated. But on the other hand this is an effort which not only means that the towns can be increased in size. They will also be better to live in.

New Power Plants: The programme for development of the power supply is therefore not only intended to cover the increased demand resulting from the construction of new dwellings and industries. The capacity is also calculated to cover an increasing per capita consumption of electricity to meet the demand when more and more households are equipped with deep-freeze, electric ovens and other electric appliances. New electricity works are being built or the old plants are expanded in all towns except one, and these projects, including the necessary transmission lines, will require an investment of some 50 mill. Dkr.

Main Repairs to the Road Network: Another step of importance to the urban population in general will be the grading of existing roads and their main repair. This will involve an expenditure of abt. Dkr. 5 mill., and in addition to making the roads more safe, it will improve the appearance of the towns and serve to reduce the wear on all vehicles.

An amount of Dkr. 3 mill. has furthermore been set aside to cover landscaping costs in connection with the new housing developments. This is to avoid the rather dreary look otherwise so characteristic of newly developed urban districts.

Sewers and Permanent Supply of Pipe Water: An amount of abt. Dkr. 30 mill. will be required to make the building sites ready for development. This will be spent on roads, sewers, water mains and drains. Roads will be built, leading into all housing developments constructed during the period under review, and sewers and water pipes (to be kept in operation all through the year) will be led into all apartment blocks.

Improved Water Supply in 11 towns: The improvement of the water supply will cost abt. Dkr. 22 mill. The waterworks in nine towns will be expanded, and a new one will be built at Upernavik, where melted ice has so far been used as drinking water. Finally, construction of a water supply plant is about to start at Nanortalik.

More systematic disposal of refuse: An essential improvement will be effected in this area, which has been the subject of much discussion. According to the Plan a dump for disposal of refuse and scrap and a night yard will have been made ready by the end of 1970 in all towns except three. During the 5-year period a refuse disposal plant will moreover have been established at Holsteinsborg, Frederikshåb, and Egedesminde. The costs involved in the disposal of refuse, etc. have been estimated at Dkr. 5 mill.

Efficient Fire Protection: As the towns develop, the fire-fighting service must also be made more efficient, and an amount of nearly Dkr. 11 mill. has been set aside for this purpose. The money will mainly be spent on specially built fire-engines, garages for these vehicles so that they are always ready to turn out, and on the installation of fire-alarms. This will all contribute to a speedier turn-out and reduce the risk of having a small fire develop into a catastrophe.

GTO-Developments: As a direct result of the increased construction activities Dkr. 39 mill. has been set aside for the building service.

The programme comprises the construction or expansion of a number of warehouses and workshops - including i.a. several automobile repair shops, and the motor park must be expanded. According to the Plan it is expected that an increasing proportion of the construction work can be handled by private contractors, and the Dkr. 28 mill. set aside to finance loans granted through the Trade Subsidy Fund may contribute towards the establishment of such private concerns.

## IMPROVED BROADCASTING SERVICE AND FINE POSSIBILITIES FOR THE TELEPHONE SYSTEM

The enormous distances and other natural conditions have always placed a heavy load on the Greenland economy because of the excessive costs incurred in the maintenance of transportation and other communications. During the period 1961-65 this absorbed one fifth of total investments. For the 5-year period 1966-70 expenses of this nature will aggregate abt. one eighth of total resources.

During the latter 5-year period the main expenditure - amounting to Dkr. 65 mill. will refer to tele-communications, i.e. telegraph, radio and telephone. Out of this amount Dkr. 16.5 mill has been reserved for a reorganization of the Greenland broadcasting system, involving i.a. the following advantages:

- a safe and satisfactory radio service for vessels and aircraft.
- a multiplication of the messages that can be handled.
- satisfactory radio service for the entire west coast.
- a possibility for a telephone service between the individual towns and from the towns to the outposts.

The transition to the new radio system, the technical term for which is the VHF-system, will during the next 5-year period demand further investments estimated at well over 40 mill. kroner. This, however, is a conversion which while serving to increase the efficiency of many social functions will also eliminate many inconveniences causing great annoyance to the individual citizen in his daily life.

Among other advances in the field of telecommunication included in the Five-Year Plan may be mentioned the establishment of a teletype service between Greenland and Denmark and public telephone systems in several towns.

#### Modernization of the inter-District Traffic:

Within the traffic system the most important feature will be the modernization and rationalization of the district traffic.

Ten new coasters will be acquired at an average cost of Dkr. 1.1 mill. each. They will be equipped for combined transportation of passengers and cargo. Many people travelling to the outposts on official business may thus go by the regular boats. This obviates the need of building new boats for the staff members of the institutions and gradually a considerable number of the people engaged in the operation of these boats can be released.

In addition to the new coasters a new passenger boat will be bought for service on the Disko Bay.

Of new commercial harbour installations the Plan includes the first stage of the harbour to be built at Christianshåb and the work to be started on a new harbour at Godthåb. In addition hereto the construction work at the harbours at Sukkertoppen and Holsteinsborg is continued, and the ocean wharf at Godthåb is expanded. Total investments in development of commercial harbours amount to Dkr. 25 mill.

As regards the air traffic in Greenland the Five-Year Plan anticipates investment of a rather moderate amount, i.e. some Dkr. 8 mill. This must, of course, be viewed on the background of the far larger amounts spent in recent years when changing over to helicopters. Towards the end of the period the air traffic network will be expanded when heliports will be built at Nanortalik, Narssaq, Umanak, and Upernavik and those at Christianshåb and Jacobshavn will be extended.

#### IMPROVED HOSPITAL SERVICE IN 6 MUNICIPALITIES

The hospital service will be improved in six municipalities, viz. Christianshåb (new hospital), Godthåb (out-patients' clinic), Julianehåb (new wing to accommodate patients), Jacobshavn (modernization of hospital), Narssaq (work will be started on medical station) and Kangatsiaq (nursing station).

In addition hereto dental clinics will be established or expanded in eight towns. Total investments in the health service of less than Dkr. 23 mill. also include vessels and automobiles for medical officers totalling Dkr. 3 1/2 mill.

#### Churches and Cemeteries:

Two new churches will be built, one at Christianshåb and one at Julianehåb, and work will be commenced on a third one, at Godthåb. At this latter town a new cemetery will also be laid out. Furthermore, an amount has been provided for

rebuilding of school chapels at the outposts and for new cemeteries and repairs to those already laid out.

Central and Local Authorities and the Administration of Justice:

At Godthåb a new office building is being erected for the central administration, while the local authorities at Godthåb, Frederikshåb, Julianehåb, and Nanortalik will be provided with better premises. At the same time it will be possible also to improve the situation as far as the district courts in these towns are concerned.

Of other investments in this area may be mentioned new police stations at Julianehåb and Godthåb. In addition hereto a new police boat will be purchased and four life-boats will be equipped with new motors. Finally, the police force will have radio installed in more cars and boats.

#### FEW NEW SHOPS

The supply service is one of the fields where the need for the Plan to be kept within certain limits determined by the economy has been most in evidence. Undoubtedly there is a demand for the building of a great many shops, warehouses, and stores of various descriptions, but the majority of these projects have been deferred to give priority to developments within the export trade, the housing sector, the educational sector and the social services. Shops or warehouses are being built, though, at Frederikshåb, Godthåb, Sukkertoppen and Angmagsalik. The total expenses in this connection are somewhat below Dkr. 29 mill, to which should be added the purchase of automobiles and trucks to a total amount of Dkr. 12 mill.

Finally, the Plan includes a tank installation, aggregating slightly below Dkr. 32 mill.

## LOANS IN SUPPORT OF TRADE

In addition to loans granted on fishing vessels, an amount of Dkr. 28 mill. has been set aside for financing of loans to private individuals and concerns (contractors, carriers, etc.).

It is impossible, however, to foretell the size of private investments as the plans in this respect are unknown. If private interests intend to financy any of the enterprises mentioned in the foregoing, there is a possibility that the amounts set aside on the Plan may be applied in the form of loans to be extended to private persons interested in handling the respective tasks. In that case the loans will exceed the Dkr. 28 mill.

The possibilities open to people in trade or business of obtaining loans through other channels than the State (the Trade Subsidy Committee) have also been improved by the opening of private finance houses (Bikuben and Grønlandsbanken).

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